



Bulletin of the Native Plant Society of Oregon

Dedicated to the enjoyment, conservation, and study
of Oregon's native vegetation

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It's Renewal Time

The NPSO membership year is January to December. Now is the time to renew. A remittance envelope is in this issue of the Bulletin. Or use the membership form on the inside back page.

NPSO brings you field trips, programs, classes, the monthly Bulletin and the annual Kalmiopsis.

This is also a good time to consider a tax-deductible contribution to our special funds. The Leighton Ho Memorial Award is used for summer research projects in western Oregon, and is a matching grant in cooperation with The Nature Conservancy. The Rare and Endangered Plant Fund supports work with our most threatened plants. The Jean Davis Memorial Scholarship is awarded annually to a botany student at an Oregon college or university. Contributions can also be made to the NPSO general fund.

Your membership and donations make it possible to carry out more of the many projects that are needed to pursue the goals of the NPSO.

State News

Jan. 20, Sat.

State Board Meeting: 10 A.M. - 4 P.M. Hosted by the Emerald Chapter in Eugene, Lane Community College Science Building, room 109. (Same place as last year.) Directions: I-5 to 30th Ave. (LCC exit) just south of Eugene. Go 1/4 mi. west, turn left on Eldon Shaeffer Dr., and proceed 1/4 mi. up hill through S curve to upper parking lot. Science Building is last on right. Main topic will be the adoption of the annual budget.

Chapter News

Blue Mountain

Dec. 4, Mon.

Meeting: 7 P.M. Small Business Development Center, SE 1st & Dorian, Pendleton. Presentations and discussions regarding the NPSO Symposium in November.

Corvallis

Dec. 11, Mon. **Meeting:** 7:30 P.M. Holiday potluck and slide show. Take ten of your favorite slides and a dessert to share, to the McEvoy's home, 3290 SW Willamette St. For more information call the McEvoy's at 754-0893.

Emerald

Dec. 18, Mon. **Meeting:** 7 P.M. This is the annual Christmas potluck and slide show. Island Lakes Condominium clubhouse, 1980 Lake Isle Dr., off Goodpasture Island Rd., across from K-Mart. Clubhouse parking is limited, but there is ample parking in K-Mart lot. Bring a light potluck dish and 12 or so of your favorite plant slides from this year.

High Desert

Meeting: No meeting in December.

Jan. 23, Tues. **Meeting:** 7:30 P.M. Central Oregon Community College Herbarium. We will meet in room 217, Ochoco Hall, and Marge Ettinger will share some of the exciting things she has done with the herbarium, and her work at the Warm Springs Reservation.

Feb. 27, Tues. **Meeting:** 7:30 P.M. Central Oregon Environmental Center, 16 NW Kansas, Bend. Professor Rick Dewey of COCC will speak to us about the mosses of central Oregon.

Mid-Columbia

Dec. 6, Wed. **Meeting:** 7:30 P.M. Mosier School. Ron Graves, District Manager, Wasco County Soil and Conservation District, will talk about the restoration project in the Buck Hollow Watershed.

Jan. 3, Wed. **Meeting:** 7:30 P.M. Mosier School. Jerry Igo recently completed a plant survey for ODOT, and will give a slide and video presentation, "Rare plants on our roadsides," on that survey.

North Coast

Meeting: There will be no meeting in December. Call Christine Stanley, 436-0161, for more information.

Portland

Dec. 12, Tues. **Meeting:** 7 P.M. First Methodist Church, 1838 SW Jefferson St., Portland. Member slide night with show and tell. Bring up to 12 of your finest slides of plants or plant locales. (If planning to show slides, please call Maya Muir, 786-2831.) Projector and screen will be provided. Room open at 6:30 for potluck snacks and socializing.

Siskiyou

Dec. 14, Thurs. **Meeting:** 7:30 P.M. A special holiday dessert potluck meeting at Julian Battaile's house, 1216 Tolman Creek Rd. in Ashland. John Irwin, an exceptional photographer, will treat us to a wildflower slide extravaganza

South Coast

For information on South Coast Chapter, call Bruce Rittenhouse (888-9328).

Umpqua Valley

Dec. 14, Thurs. **Meeting:** 6:30 P.M. Potluck at Hillcrest Vineyard. Bring your favorite plant slides, photos or specimens. Directions: From exit 125 on I-5, go west on the following roads: Garden Valley, Melrose, Doerner, then north on Elgarose to the Vineyard. Follow directional signs, or call 541-673-3709.

Willamette Valley

Meeting: No meeting in December.

William Cusick

Dec. 13, Wed. **Meeting:** 7 P.M. Forest and Range Laboratory, Gekeler and C Aves., La Grande. After a short business meeting, Andy Huber, manager of Grande Ronde Overlook Wildflower Institute Serving Ecological Restoration (GROWISER) will do a slide presentation to share his experience with protecting and reintroducing wildflowers. For information call Barbara Russell at 963-7495.

IMPORTANT NOTE TO FIELD TRIP PARTICIPANTS

Field trips take place rain or shine, so proper dress and footwear are essential. Trips may be strenuous and/or hazardous. Participation is at your own risk. Please contact the trip leader or chapter representative about difficulty, distance, and terrain to be expected on field trips. Bring water and lunch. All NPSO field trips are open to the public at no charge (other than contribution to carpool driver) and newcomers and visitors are always welcome.

NOTICE TO FIELD TRIP CHAIRS AND LEADERS

The Forest Service and other agencies have set policies limiting group size in many wilderness areas to 12. The reason is to limit human impacts on these fragile areas. Each group using wilderness areas should be no larger than 12.

POSTAL NOTICE

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Guidelines for Contributors to the Bulletin

NPSO Bulletin published monthly as a service to members and the public.
All kinds of contributions welcome. **Copy due by the 10th of the month.**

CREDITS: Identify author and affiliation. If not original, cite source and date.

ILLUSTRATIONS: Line drawings, prints and high contrast black-and-white prints useable. Some McIntosh graphics can be used. Contact editor for current needs, or send illustrations.

BOTANICAL NOMENCLATURE: Follow "Flora of the Pacific Northwest" by Hitchcock, or "The Jepson Manual" where appropriate.

FORMAT: Submissions can be in any form. Use of a modem is not possible at this time.

For further details consult editor

ORIGINALS: Submissions are not returned, unless requested.

Summer Intern Reports

This is the second in a series of three articles in which NPSO interns discuss their activities during the 1995 field season. Interns were selected from a pool of applicants and worked with scientists from the Oregon Department of Agriculture/OSU Plant Conservation Biology Program to carry out research related to threatened and endangered species in the Pacific Northwest. Project locations ranged from beaches on the coast to an island in the Columbia River. Interns were jointly funded by NPSO, state and federal dollars and they plan to use the experiences to further their careers in botany and biology. Thanks again to NPSO for contributing to botanical education.

Tom Kay and Bob Meinke
Plant Conservation Biology Program
Oregon Department of Agriculture

FRASERAS IN THE FOREST: MONITORING GREEN GENTIAN POPULATIONS IN SOUTHWESTERN OREGON

Fraseria umpquaensis, variously known as *Swertia umpquaensis*, green gentian and Umpqua swertia, is a category 2 candidate for listing under the federal Endangered Species Act, as well as a candidate for listing by the state of Oregon. As part of my work as a NPSO/ODA summer intern, I was involved in the establishment of long-term plots and the collection of data in an effort to monitor long-term population trends of this species.

Plots were established at three sites in the Siskiyou Mountains north of the North Fork of Silver Creek. Plot establishment consisted of superimposing a rectangular grid over the designated population, thus dividing a fairly large and irregularly shaped unit into small, manageable pieces. Data collection included counting the total number of basal rosettes, and recording the phenological state of each rosette within the plot.

Thanks to the advice and assistance of botanists from both the Medford District BLM and the Siskiyou National Forest, we quickly established plots and collected data at the first site, leaving time to do some great botanizing in the area. Among the many delights we observed were the

Bolander's lily, *Lilium bolanderi*, with its beautiful red perianth and wavy-margined leaves, and the Vollmer's lily, *L. pardalinum* var. *vollmeri*, growing near enchanting seeps and along the margins of small streams.

The next day we hiked to a higher elevation population, situated on a small ridge at about 4,500 feet. We were rewarded with a beautiful view of the surrounding ridges, most of which, including the one we were standing on, were scarred by recent lightning-caused fires. Many wonderful plants were also there to greet us, including a shrubby oak with distinctly serrate leaf margins (*Quercus sadleriana*), the weeping Brewer's spruce (*Picea breweriana*), and ground-cones (*Boschniakia* sp.).

After spending the better part of the day scouring the ridge line for *Fraseria*, we eventually located some small clusters of plants, and were ready to begin establishing plots. The soft clouds which had filled the valleys below in the morning had been building all day to magnificent thunderheads, and we listened with interest to reports via a Forest Service two-way radio of lightning storms in northern California headed northward. From one Forest Service district after another came reports of lightning strikes, as we tracked the storm moving quickly in our direction. Discretion being the better part of valor, we decided to head for lower ground as the wind picked up and lightning began striking the surrounding ridges. This seemed the most prudent course of action, especially as the task at hand involved pounding six foot lengths of metal pipe (potential lightning rods) into the ground to establish plot corners. We scurried off the ridge, the rain arriving in earnest just as we reached our vehicles. Waiting out the storm at the saddle, we were treated to a lovely electrical display, and the chance to see Mother Nature in one of her more exciting moods.

The following dawn was beautiful, with the same billowy clouds in the valleys making the mountain tops look like islands in a sea of cotton candy. We finished the ridge plots, then hustled to the final site near the saddle, feeling confident that we could easily recoup the time used (certainly not wasted) storm watching the previous day. All thoughts of finishing early disappeared, however, as we looked at the last remaining plot. While the work was essentially the same from location to location, the previously sites were fairly open, with relatively few individual rosettes. The final location was long and narrow, the *Fraseria* growing densely along an old road, and slowly being

crowded out by a dense jumble of young "dog hair" trees and manzanita bushes. Awesome feats of gymnastics were required to accomplish the same tasks as before. With one person recording data, and another moving Douglas fir boughs out of the way, the third was able to balance on one foot while standing on a fallen log, lean under the "Doug-fir" and over the manzanita, and count plants! As the late afternoon shadows began to fill the valley, we finally finished our last measurements, and headed back to our camp, satisfied, albeit a bit scratched and scuffed up, with a job well done.

I'd like to thank the Native Plant Society of Oregon and the Oregon Department of Agriculture for making this internship possible. I found it a unique and rewarding opportunity to gain valuable field experience in Plant Conservation Biology. Special thanks go to Tom Kaye and Bob Meinke and the entire 1995 field crew. Their encouragement and laughter made this experience an especially enjoyable one.

Susan Kolar

BULLETIN MAILING COMMITTEE

Marvel Gillespie, April Fong, Barbara Linden, Bob Powne and Susan Yamanaka have volunteered to take on the responsibility for the monthly mailing of your Bulletin. Many thanks to them!

GIFTS FOR GARDENERS

Plants, books, garden gifts, celebrity decorated trees. December 2, 9 A.M. to 5 P.M., World Forestry Center, Portland. Call 636-4112 for more details. Proceeds to benefit Hoyt Arboretum and the Berry Botanic Garden.

EXPERT SYSTEM PLANT KEYS

This article is to expand on the note in the April issue about computer plant identification keys. In the last few years, computer database programs known as "expert systems" have been developed which sort and find data in a particular way. More recently, at least three specialized programs of this type have been developed for biological/botanical data. They allow a person to enter the characteristics of a plant specimen, and match

them with the species that fits those characteristics. At this time, the most effective and easiest to use is the XID Identification System, developed by Richard Old, Ph. D., a botanist in Pullman, Washington. The program will run on any IBM compatible computer, although it runs best on a 386 or higher. This program is ideally suited for field work, as it will run on a hand-held "palm-top" computer. A version which will run in Windows will be available in about a year.

In the past year, I have been using this system to create plant identification keys for this area. So far, keys have been completed for the Umatilla National Forest, the Wallowa-Whitman National Forest and the Wallowa Mountains/Eagle Cap Wilderness. By next spring, the data will have been entered for the characteristics of all the plants in Oregon, Washington and Idaho, which will allow the creation of separate keys for any given area or plant list in the three state region.

The following is a description of how the program works. To identify a plant, the user first selects a menu of types of plant characteristics (such as leaves, stem, inflorescence, flower or fruit). The user then selects those characteristics which best describe the plant to be identified. The computer eliminates from consideration all plants which do not match those characteristics, and also eliminates those menu choices which would not help to distinguish among the remaining species. The user then goes to another menu and makes another selection, and so on. At any point, the user may ask the computer to analyze the remaining species and provide a list of the characteristics which are easiest to identify and will most effectively separate among the remaining species. The user may select from that list or go to a different menu. In addition, one may call up an alphabetized list of the remaining species (in either common or scientific name), including the page numbers of references (such as Hitchcock or Jepson) that describe the plants. When all remaining species are of the same family or the same genus, the computer identifies that family or genus. When all species but one have been eliminated, the plant has been identified. If uncertain, the user may check against the references listed on the screen, and may check for errors by calling up a list of the characteristics that were entered by the user.

Technical botanical terms are kept to a minimum, and help screens are provided for all menu items. The help screens include definitions of terms, and a description of the habitat and geographic range for each plant. Graphics with line drawings to ac-

company the definitions of terms (such as leaf shapes and inflorescence types) are being added, and will be available by next spring. The program has the capability of adding line drawings and/or color photographs of the plants; however, this would take up considerable storage space in the computer.

The traditional dichotomous keys we have struggled with are very ingenious, given the limitations of pen and paper with large volumes of data. They also demand great skill to create and much practice and patience to use. A frequently frustrating experience with dichotomous keys is being expected to make a choice in the key when the necessary part of the plant (example: fruit or flower) is not present. In an expert system key, the user is simply asked to describe the features that are most obvious about the plant. If a plant characteristic cannot clearly be defined, such as whether a leaf is best described as lanceolate or linear, the user may tell the computer to include all species that have either description.

With a little practice, identifying a plant takes one or two minutes. In the Umatilla National Forest program, with 1,357 plants, it usually takes only four or five entries to identify a plant. This speed and simplicity is due to the computer identifying the species that has a particular combination of characteristics. For example, in the Umatilla NF there are 85 plants with bilabiate/two-lipped flowers, 260 plants with pink to red flowers, and 105 with blue flowers. However, there is only one plant with bilabiate flowers that are both pink and blue -- *Collinsia parviflora*.

The keys include fairly comprehensive data on each species in order to provide the user with the widest possible range of characteristics from which to choose. The keys are separated into five sections: flowering plants including trees and shrubs (except Asteraceae), Asteraceae, conifers, grass-like plants, and spore-bearing plants. In the section for flowering plants, for example, there are over 85 different menus of characteristics.

For additional information, including costs, I can be contacted at 17 SW Frazer, Suite 28, Pendleton, OR 97801. Telephone: (503) 278-2222 (O), 276-5547 (H). FAX 276-8405, or dbarnes@ed-netl.osl.or.gov.

Bruce Barnes
Flora ID Northwest

SUSTAINABLE FORESTRY BALLOT INITIATIVE

A grass-roots campaign is underway to place an initiative on the ballot in the next election mandating sustainable forestry practices. The initiative would prohibit clear cutting on private, state and federal land and ban the accompanying use of chemical herbicides and pesticides. (While Oregon could not actually prohibit clear cutting on federal land, such a measure would act as a strong request to the Feds.)

The measure is sponsored by Oregonians for Sustainable Forestry (OSF) and backed by the Forest Conservation Council. The Native Forest Council, Pacific Rivers Council, the EcoForestry Institute and Lincoln City Water Watch have already given their endorsements.

The initiative stresses that labor-intensive technologies which would replace clear cutting would create new jobs, and that the chemicals used with clear cutting have played a significant role in the decline of fish and of water quality. NPSO members should have no trouble seeing that alternatives to clear cutting are kinder to flora in the understory.

OSF plans to gather all signatures by volunteers. More petitioners are needed, and financial contribution are welcome. Anyone interested should contact Oregonians for Sustainable Forestry at 85560 Svarverud Road, Eugene, OR 97405, or call (503) 344-5406.

Maya Muir
Portland Chapter

A
bies
grandis
amabilis
lasiocarpa
Picea glauca
Picea sitchensis
Tsuga heterophylla
Pseudotsuga menziesii
Pinus
albic
aulis

STRAWBERRY MOUNTAINS FOR *CAREX*

(Prologue: Trying to use a dichotomous key on monocots is almost as difficult as trying to wrest laurels¹ from a ... Whoa! This is already going in too many directions, and I have a long tale I want to get behind me ...)

The *Carex* Working Group followed their happy hearts and innocent intentions to the striking Strawberries from the 13th to the 17th of August. The Strawberry Mountains are part of the Blue Mountain complex in northeastern Oregon. They are located between the Ochoco and Wallowa ranges in Grant County just southeast of John Day. Venturing there in search of wild and elusive Strawberry carices were Peter Zika, Barb Wilson (and her 12-year-old nephew and sedgehead wanna-be, David Williams), Jim Oliphant, and Bruce Newhouse. They caught up with Danna Lytjen and Nick Otting at the cozy Starkey Guard Station cabin.

The trip commenced with gaping at, admiring, fondling and photographing a recently rediscovered relict population of *Carex macrochaeta*. The group witnessed the blatant inactivity of this small colony hanging loose in the spray zone of an unnamed dribble near Wahkeena Falls in the Columbia Gorge. Not seen in the Gorge for decades, this population was located again in 1994. In Oregon, it is known only from this site and from a north coastal location. PZ had returned from Alaska the night before the trip began with a smuggled *C. macrochaeta* specimen for comparison, but in this writer's opinion² the Oregon material was clearly the more handsome.

Zippering ever eastward, the sedgeaholics caught a glimpse of Multnomah Falls,³ and later, they botanized the Boardman Botanical Wayside (the lawn and irrigation ditch at the Boardman rest stop on I-84). This stop produced unusual grasses,

1. At some point it may be worth noting that laurels are hardy in mild climates.
2. Which, I might add, has been correct at times in the past.
3. Near the top of the Falls they noticed this rather large -- well, bus-sized, actually -- piece of rock that looked restless. Soon after their visit it changed its altitude [sic], and has alleviated the discomfort it felt [sic]. Rumor has it that the Chinook word "Multnomah" actually means "Rock."

rushes and gazes from onlookers.⁴ Plants were pressed, the accelerator depressed, and after only a few more hours, the group arrived at Starkey in time for a late dinner and early sleep under a zillion stars -- and the gentlest touch of frost.

While buttering our⁵ morning buns, slurping java, and reviewing geology maps, we packed for the Strawberry Mountains. We arrived at the southeast edge of the wilderness that afternoon, and botanized the trail into High Lake (literally, for *Isoetes* sp.). Along the trail we admired the eye-holding *Epilobium obcordatum*, the subtle *Poa bolanderi* (an uncommon annual), and a lush *Athyrium alpestre* population on a boulder/talus slope. Seepy meadows proved to be rich *carecta*,⁶ providing new names for the Grant County list.

We split into three groups the following day, with BW and JO driving shuttles around to the north side to meet the rest of us at our next campground. It was an amazing off-trail day on the ridgetops as we traversed the wilderness from south to north, and we were caught by a summer shower while picking our way down through steep talus. We wearily dragged our bagged quarries (sedges and a number of other vegetable appetizers) into camp for an evening of swapping stories about who found the largest perigynia and such.

The next day led us to another part of the Strawberries: Pine Creek, just east of the northwest corner. JO's serpentinite prediction was eerily accurate, and one member of the group impulsively regurgitated fond memories of Josephine County. *Calochortus macrocarpus* graced the roadside in late season pulchritude, and we were pulled in further. As we piled out of our vehicles and into a moist drainageway, a unique experience befell us -- sort of a botanical catatonia. The group discovered a sedge which was not identifiable at first or second glance. Shyly noting the sexual monotony of the colony,⁷ we rose above our social training

4. For the sake of clarity (otherwise unknown in this report), we were not rushed by onlookers. They were probably kept at bay by our enthusiastic interest in nature.
5. Subtle shift in person occurring here ...
6. *Carectum*: a place where sedges grow. (Plea to the reader: The CWG is always seeking to expand its sedge lexicon with obscure terminology. Send it our way!)
7. Hopefully, you weren't looking for something interesting in this footnote. (Author's note to himself: Be extra careful here ...)

and acknowledged the subtle, yet unmistakable dioeciousness⁸ of the situation. Because not many sedges are of this persuasion (i.e., evolving to live in "two houses"), taxonomic options were limited, and all sedge heads turned hopefully toward PZ's strawberry-bearded visage. His humble expertise assuaged our apprehension with an annotated acclamation of "*Carex scirpoidea!*"⁹ This species (in the wild) was new to the life list of almost everyone else present and we delighted in finding more and more of it. In the next few hours we learned that it is a dominant along the upper reaches of Pine Creek and in the sedge-rich and rush-lush headwater meadows. A highlight for BW was the discovery that "true" *Festuca idahoensis* grows on dry serpentine soils in this area.

After our day of hiking and judicious collecting in the Pine Creek drainage, we pooled and tallied¹⁰ our way home. We saw 30 species of *Carex* (8 of which are new, vouchered Grant County records), and collected specimens and recorded numerous other site locations for many species. We also tested the new Atlas Project plant list format by completing two comprehensive lists.

The CWG recommends the Strawberry Mountains for anyone searching for botanical adventure. Thanks are due to the Native Plant Society of Oregon for its support of CWG research activities. Call the CWG if you are interested in sedges, at 737-4106 (OSU Herbarium). Next summer, we hope to do two trips: the Calapooya Mountains and Cascades of southern Lane and northern Douglas counties, and Lake and Klamath counties!!!

Submitted by Bruce Newhouse,
Emerald Chapter,
on behalf of the CWG

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- 8. (Then maybe you need a new dictionary!)
 - 9. Which, in all frankness, really isn't much more scirpoid than any other *Carex* ...
 - 10. Not to be confused with another popular English pastime, "Sheeps and Tides," ... although drowning in numbers is common to both.

EXTINCTION OF THE ESA BY ANY OTHER NAME IS STILL EXTINCTION!

Senator Dirk Kempthorne's (R - ID) ESA Reauthorization bill, which he plans to introduce in the next few weeks, joins the Young-Pombo bill (HR 2275) as another lethal assault on the Endangered Species Act. An outline of the bill, recently released, reveals that this bill will eliminate the following ESA protections of fish, wildlife and plant resources.

1. The fundamental goal of the ESA -- recovery -- is eliminated, and the Secretary of Interior is given discretion to choose "conservation objectives" for species, other than recovery. This will mean extinction for hundreds of species that are declining because of habitat destruction.
2. It eliminates Section 7 consultation requirement so an agency can simply make a self-serving determination that its activities are consistent with the conservation plan for the species, without review by the U.S. Fish and Wildlife Service.
3. Essential habitat protections on private lands are eliminated. This overturns the Supreme Court's recent Sweet Home decision, which found in favor of habitat protection on private land.
4. Species protections on federal lands are drastically weakened, overruling the TVA v. Hill Supreme Court decision. Federal agencies could avoid compliance with the ESA if species protection goals conflict with other statutory goals, such as "multiple use" of federal lands.
5. The bill precludes the Secretary of the Interior from taking actions to protect and recover aquatic species if such actions limit water use, such as by agriculture or industry.
6. The bill disregards scientific findings and requires federal agencies to ignore warnings of ecosystem decline, allowing unfettered exploitation of natural resources to proceed. It states, "Extinction is a natural phenomenon over which people have limited control."

HELP SAVE AMERICA'S PRECIOUS NATIVE PLANTS, FISH AND WILDLIFE! TELL YOUR SENATORS TO OPPOSE SENATOR KEMPTHORNE'S ESA REAUTHORIZATION BILL.

Mariana D. Bornholdt
Willamette Valley Chapter

